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SP0037 USING GENETICS IN PERSONALISED MEDICINE IN RHEUMATIC DISEASES

Anne Barton. University of Manchester, Centre for Musculoskeletal Research, Manchester, United Kingdom

Background: For all treatments available for rheumatoid arthritis (RA), none are effective for all patients. For many drugs, patients are given 3-6 months of treatment before a decision is made regarding efficacy and, for those in whom the treatment does not work, that can be a period of on-going disease activity, exposure to the risk of side effects and possible accumulation of joint damage, all of which impact quality of life. Stratified medicine approaches aim to better target treatments to those most likely to respond. However, currently, CRP/ESR are the only biological markers (biomarkers) routinely used to inform whether therapy is required and RF/ACPA status are often considered.

Objectives: To update in progress of using genomic approaches to inform treatment selection in rheumatoid arthritis

Methods: National and international precision/stratified medicine programmes are investigating whether genetic and epigenetic biomarkers could help in the selection of therapies and progress will be reviewed.

Results: Recent studies have developed new outcome measures to assess treatment efficacy for controlling synovitis, confirming previous findings from genetic studies of heritability. Issues around the best tissue to sample, the predictive ability of a test and confounding factors including adherence will be considered and emerging biomarkers reviewed.

Conclusion: Matching the right treatments to the right patients is the goal of personalised medicine and potential biomarkers are starting to emerge. However, caution is required as none have so far been proven to be clinically useful or cost-effective.

REFERENCE:

- [1] Hensor, et al. Rheumatology 2019; Plat et al, Arthritis and Rheumatol 2019.

Disclosure of Interests: None declared

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WEDNESDAY, 12 JUNE 2019

18:15:00 – 19:45:00

The riddle of adherence

SP0038 FACTORS IMPORTANT FOR MEDICAL ADHERENCE

Bart van den Bemt. Sint Maartensliniek, Netherlands

Factors important for medical adherence in rheumatic diseases Disease-modifying antirheumatic drugs (DMARDs) are the cornerstone for the treatment of inflammatory arthritis and fundamental to prevent radiologic progression in patients with rheumatoid/psoriatic arthritis. However, the full benefit of DMARDs can only be achieved if patients follow prescribed treatment regimens. Adherence, or the extent to which patients take medications as prescribed, is however low in chronic medical conditions: approximately 50% of all people with chronic medical conditions do not adhere to their prescribed medication regimens [1,2]. Previous research in patients with rheumatic diseases vary from 30% to 107%, depending on the used measurement method [7].

Thus, improving adherence to DMARDs could dramatically improve the efficacy of drug therapy in rheumatic diseases and reduce costs. However, so far, interventions designed to improve medication adherence are only partly effective in changing medication-taking behaviour [2-5].

To be able to improve adherence, factors should be known that are associated with medication adherence in RA. This will help us to target non-adherent patients and design interventions to improve adherence. Although several studies have examined factors associated with adherence to treatment with DMARDs, hardly any variable was found to be consistently and strongly related to adherence. [6-7]. Despite this, there is evidence that especially patient's need to take medication, prior DMARD use, patient's self-efficacy and information delivered to the patient might be associated with medication adherence.

Overall, two types of non-adherent behaviour are commonly observed: unintentional (due to forgetfulness, regimen complexity or physical problems) and intentional (when the patient decides not to take the treatment as instructed). In case of

intentional non-adherence, the decision to take medication is based on a cost benefit analysis weighing the costs/risks of the treatment against the perceived benefits. This implicates that health care professionals should individually assess patient's (un)intentional barriers to take medication and target medication adherence interventions on patient's individual barriers. Thus, besides tackling (unintentional) practical barriers, such as forgetfulness (with for example reminder services), clinicians should also be sensitive to patient's personal beliefs that might impact medication adherence, and should discuss with their patient any concerns that they raise about prescribed medications. This lecture will give insight in the latest insights in the research of factors important for medication adherence and their practical consequences for adherence improving interventions in clinical practice.

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- [6] Van den Bemt BJ, Zwicker HE, van den Ende CH. Medication adherence in patients with rheumatoid arthritis: a critical appraisal of the existing literature. Expert Rev Clin Immunol. 2012;8(4):337-51.
- [7] Pasma A, van't Spijker A, Hazes JM, Busschbach JJ, Luime JJ. Factors associated with adherence to pharmaceutical treatment for rheumatoid arthritis patients: a systematic review. Semin Arthritis Rheum. 2013 Aug;43 (1):18-28. doi: 10.1016/j.semarthrit.2012.12.001. Epub 2013 Jan 24.

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THURSDAY, 13 JUNE 2019

10:15:00 – 11:45:00

Advances in understanding and treating of SLE

SP0039 WIN: DE-CONVOLUTING THE COMPLEXITIES OF SLE – RECENT INSIGHTS INTO THE PATHOGENESIS

Mary K. Crow. Hospital for Special Surgery, Weill Cornell Medical College, Mary Kirkland Center for Lupus Research, United States of America

Background: SLE remains one of the most complex diseases in medicine, with protean alterations in immune system function contributing to autoimmunity, tissue inflammation and damage, and diverse clinical manifestations. While considerable advances in understanding the molecular pathways and mediators involved in SLE have led to identification of rational therapeutic targets, a full understanding of the upstream etiologic drivers of the disease and how genetic risk and environmental stimuli shape the evolution of the disease and its clinical heterogeneity requires continued investigation.

Objectives: To review recent literature relevant to the etiology, pathogenesis and heterogeneity of SLE.

Methods: Review and synthesis of recent literature.

Results: Recent advances in characterizing the mechanisms of regulation and degradation of endogenous nucleic acids, particularly insights derived from disorders based on a variety of single gene mutations that result in production of type I interferon, suggest potential drivers of type I interferon production in SLE. The functional alterations in many aspects of T and B cell function in patients with SLE, some attributable to type I interferon, continue to be identified. Potential contributions of the microbiome expand our view of candidate disease-enhancing factors. Interest in defining patients at risk for evolving from pre-clinical to clinical disease

that fulfills classification criteria for SLE may help to identify the essential elements of lupus pathogenesis and suggest approaches for disease prevention.

Conclusion: Endogenous nucleic acids have emerged as compelling candidates for drivers of lupus pathogenesis, along with their traditional role as antigenic targets of lupus autoantibodies. Although the clinical heterogeneity of SLE has confounded efforts to successfully test new therapies, advances in identifying sources of nucleic acids stimulating type I interferon and alterations in adaptive immune system function help us move toward a synthetic understanding of disease pathogenesis and suggest that therapeutic regimens targeting both innate and adaptive immune systems might be required to control or prevent disease.

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SP0040 HOT: NOVEL PARADIGMS IN THE MANAGEMENT OF SLE

Thomas Dörner. Charite Berlin, Berlin, Germany

Heterogeneity of systemic lupus erythematosus (SLE) remains challenging and, thus, many unmet needs remain, including the development of safer and more efficacious therapies to better control SLE activity resulting in improved outcomes. To develop innovative therapies, we need a far better understanding of its pathogenesis including delineation of clinical phenotypes. Recently, the lupus community has developed new classification criteria, T2T principles as well as low lupus disease activity and remission definitions to overcome obstacles created by SLE heterogeneity and improve outcomes. New proposals for the histologic classification of lupus nephritis have also been put forward and undergo evaluation. Recent therapeutic advances and clinical developments hold promise for improved treatments in this challenging disease and will be discussed.

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THURSDAY, 13 JUNE 2019

10:15:00 – 11:45:00

From child to adult care – breaking down the barriers of transition

SP0041 TACKLING TRANSITION: THE CURRENT LANDSCAPE, AND WHERE WE ARE HEADING

Stephen Ball. Manchester University Foundation Trust, Specialist Medicine, Manchester, United Kingdom

The transition from childhood to adulthood is a key life stage. While the time course of the bio-psycho-social development of young people is continuous, many of the health and social care services with which they may be involved have relatively fixed, rigid structures. This can be challenging for young adults: leading to a sense of marginalisation and alienation. Young people with long term health or social care needs and who require on-going support as they exit childhood are often further challenged by the requirement to move from a children's service (with which they are familiar) to an adult service: one requiring new relationships and with differing expectations.

Evidence supports the view that young people may be lost in the gap between children's and adult services, with a negative impact on longer-term health. Good practice in 'transitional' care ('a multi-faceted, active process that attends to the medical, psychological and educational/vocational needs of adolescents as they move from child to adult-centred care', Blum 1993) can improve engagement and result in positive longer-term outcomes. Developmentally appropriate services recognise young people as a distinct group, subject to constantly changing circumstances. This model considers the young person as a whole: addressing their biological, psychological and social development in the broadest terms. Critically,

the approach supports the young person to take an active role in the processes with which they are involved. While developmentally appropriate care and 'transition' are not equivalent, a developmentally appropriate approach to transition has clear benefits: seeing the process as being outcome and skills-based, rather than time-based.

Adolescence and early adulthood are times when life-long health behaviours are set in place; good health for young people is a foundation for good health in later life. There is a need to invest in age appropriate health promotion and youth-friendly health services if we are truly committed to improving young people's health outcomes and the health of the adult population they will go on to form. There is an opportunity to develop and sustain a generational shift in health literacy and health-related behaviours: a real legacy; and an investment in the future.

REFERENCE:

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Disclosure of Interests: None declared

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SP0042 FROM PAEDIATRIC CARE TO ADULT CARE – THE NEEDS OF YOUNG PEOPLE, AND HOW HEALTHCARE PROFESSIONALS CAN FACILITATE OPTIMAL TRANSITION

Judy Ammerlaan. University Medical Center Utrecht, Rheumatology and Clinical Immunology, Utrecht, Netherlands

In this presentation, the learning experiences and reflections of a healthcare team on redeveloping the transitional care for young adults with RMD's are shared.

In the process of redeveloping care, the healthcare team experienced that small steps, driven by patient stories and involvement of patients in all phases from development to evaluation, led to meaningful results.

The eHealth interventions, developed to support the transition and to increase self-management were found to be feasible and evaluated positively by the young adult group. But the healthcare team also experienced that the focus on the patient alone, is not enough to implement self-management interventions and sustain patient centered care in daily practice. How healthcare professionals personally think and feel about patient centered care is essential and needs to be discussed in daily care. It determines the way of being present with attention and commitment in daily health care. It affects the hands, head and heart.

A daily reflection on shared answers of the patient and the health care professional to the question 'what is the most important to you?' may help to implement patient centered care in health practice.

Disclosure of Interests: None declared

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SP0043 MY IDEAL TRANSITION

Indra Beer. Rheuma – Liga Bundesverband e.V., Projekt "Mein Rheuma wird erwachsen!", 53111 Bonn, Germany

In my lecture I will present the barriers of transition from the young patient's point of view and show possible solutions.

Every year 2.000 young people aged between 16 and 19 arrive at the transition phase in Germany. One third of these young rheumatic patients stop or interrupt their therapy when they have to change from the paediatric rheumatologist to the adult rheumatologist.

In my talk I will focus on significant changes in the lives of young people. This includes e.g. the changes due to education and training, the first partnership or just moving out of the parents' house.

Especially in the difficult phase of transition young people should be strengthened and be made aware of the differences between the doctors treating them and the barriers they will be facing. They should learn to manage themselves and be made sensitive that long-term damage can be avoided.

So, based on my experience I will outline the various support services that are necessary to prepare and accompany young people in that transition phase. Only then, in addition to evidence-based medical care, young people with a rheumatic disease can achieve a successful long-term healthcare outcome that will enable full participation in life.

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